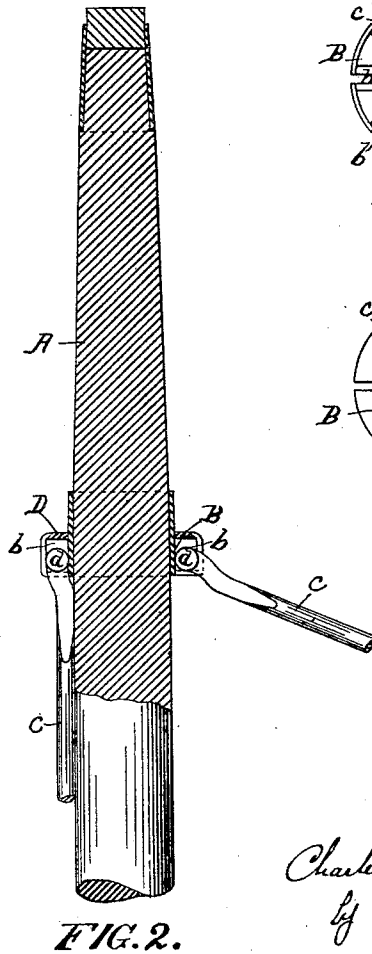
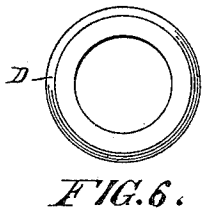
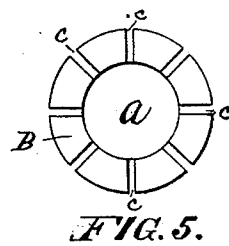
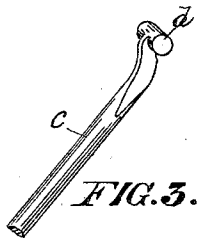
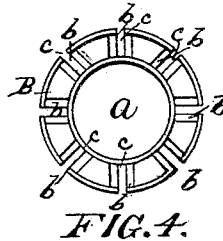
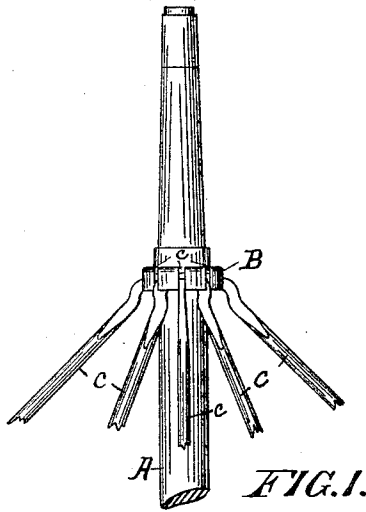


(No Model.)

C. E. METZGER.
UMBRELLA OR PARASOL.

No. 460,791.

Patented Oct. 6, 1891.



WITNESSES:

E. L. Edwards
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INVENTOR
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UNITED STATES PATENT OFFICE.

CHARLES E. METZGER, OF WILLIAMSPORT, PENNSYLVANIA.

UMBRELLA OR PARASOL.

SPECIFICATION forming part of Letters Patent No. 460,791, dated October 6, 1891.

Application filed February 6, 1891. Serial No. 380,422. (No model.)

To all whom it may concern:

Be it known that I, CHARLES EDWARD METZGER, a citizen of the United States, and a resident of Williamsport, in the county of Lycoming and State of Pennsylvania, have invented certain new and useful Improvements in Umbrellas or Parasols, of which the following is a specification.

My invention relates to improvements in umbrellas or parasols, and more particularly to improvements in the construction of the notch and the rib and in the manner of securing the rib to the notch, and is an improvement upon Patent No. 436,251, granted to me on September 9, 1890.

My invention consists of a notch furnished with sockets, the opposite walls of each socket being perfectly straight and parallel to each other and adapted to receive and hold the end of the rib, which is furnished with a cylindrical or approximately cylindrical head having flat sides adapted to bear against the flat walls of the socket.

My invention further consists in a device for closing the upper parts of the sockets in the notch, so as to retain the heads on the ribs in place within the sockets, and in the peculiar construction or crook upon the upper part of the rib, whereby the rib is caused to lie directly alongside the stick when the umbrella is closed and prevents the upper part of the rib from chafing and cutting the cover.

In the accompanying drawings, forming part of this specification, and in which similar letters of reference indicate similar parts throughout the several views, Figure 1 is a side elevation of upper part of umbrella-stick, showing the notch and upper part of ribs; Fig. 2, an enlarged sectional elevation of the upper part of stick and notch; Fig. 3, a view of upper part of a rib; Fig. 4, a top plan of notch; Fig. 5, a bottom plan of notch, and Fig. 6 a plan of cap for closing upper part of notch.

A is the umbrella-stick; B, my improved notch; C, the rib, and D the cap for closing the upper part of sockets in the notch.

My notch B is constructed of metal. It is

furnished with a central aperture *a*, through which the stick passes, and it is secured to the stick in the usual manner.

b are equidistant sockets in notch B for receiving and holding the ends of the ribs. These sockets are preferably milled out or cast in the notch, and the opposite sides of each socket are perfectly flat and preferably parallel to each other. *c* are slots upon the front and bottom of the sockets, through which the neck or upper part of the rib passes, and which allow the rib to be raised and lowered to open or close the umbrella.

The upper part of the rib C is furnished with a cylindrical head *d*, the axis of which is placed at right angles to the axis of the rib. The ends of this cylindrical head are perfectly flat and are at right angles to its axis. The cylindrical head *d* is of a length exactly equal to the width of the sockets *b*, so that when this head is placed within the sockets the flat ends of the head will bear against the flat side walls of the sockets, and the rib will hence have great rigidity when in place. I have described and illustrated the head *d* as cylindrical in shape, and I prefer this construction as it better fills the sockets *b*; but it will be understood that the head may, if desired, have a spherical form with flat sides to bear against the walls of the sockets.

As the sockets *b* have an inside as well as outside and end walls, I have made the upper part of the rib with an inward crook, so as to cause the rib to lie directly alongside the stick A when the umbrella is folded up. This arrangement of the ribs not only permits the umbrella to be folded into a very small space, but also keeps the upper part of the rib from touching and chafing the cover when the umbrella is raised or lowered.

The heads of the ribs being placed in the sockets *b*, I drop the cap D upon the tops of the dividing-walls between the sockets and then bend the front walls, which are somewhat higher than the end walls, over this cap, as shown in Fig. 2, securely locking this cap and the ribs in place.

The cap D is preferably furnished with a

beveled edge, as shown, so that the outside walls of the sockets *b* may be more easily bent over it.

5 My notch, when attached to the stick and carrying the ribs, presents no sharp surfaces to cut or chafe the cover, as is the case with the notch generally in use.

10 The slots *c* upon the front of the notch are of sufficient length to allow the umbrella or parasol to turn inside out without breaking or injuring it.

Broken ribs may be very readily removed from and new ribs placed in the sockets in the notch by raising the cap *D* sufficiently to
15 allow the passage of the head *d* of the rib between it and the upper part of notch.

Having thus described my invention, I claim—

The combination, in an umbrella or parasol, of the stick, a notch furnished with sockets having perpendicular dividing-walls and front walls somewhat higher than the dividing-walls, slots in the front walls opposite the sockets, ribs with flat-sided heads, and a flat disk of metal adapted to lie on the dividing-
20 walls and to be held in place by bending in the upper end of the front walls, all substantially as and for the purposes set forth.

C. E. METZGER.

Witnesses:

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